REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Independent claims 11 and 13 are amended to clarify and emphasize patentable aspects of this invention. Dependent claim 17 is added to round out the scope of protection. Claims 15 and 16 are canceled. Support for the amendments is provided, for example, in Figs. 4A, 4B, 4D, 5A-5E and 9 and paragraphs [0056] and [0076] of Applicants' published specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 15 and 16 were rejected under 35 USC 112, first paragraph, based on the written description requirement. Specification paragraph [0056] has been amended to provide an express description of the subject matter of previous claims 15 and 16 now incorporated into the independent claims. No new matter has been added by the specification amendment. Original Figs. 4A, 4B and 4D clearly show that each of the radio communication terminal apparatuses 200-1, 200-2 and 200-4 transmits a transmission signal (RACH) comprised of a plurality of access signals (transmission packets) using at least two (e.g., five) consecutive time slots (TS1-TS5). Accordingly, withdrawal of this rejection is deemed to be warranted.

Claims 11 and 13 have been amended to overcome the rejection under 35 USC 112, second paragraph, based on antecedent basis. Withdrawal of this rejection is respectfully requested.

Claims 11-13 stand rejected under 35 USC §102(e) as anticipated by Toskala et al. (US 6,917,602). Claims 15 and 16 were rejected under 35 USC 103(a) as unpatentable over Toskala et al. (US 6,917,602) in view of Newberg (US 7,088,734). To the extent that these rejections may be

5

deemed applicable to the amended claims presented herein, the Applicants respectfully traverse as follows.

Toskala does not teach or suggest the following matter recited in claim 11:

(1) "receiving information which is transmitted from a base station apparatus, wherein said information specifies a number;"

(2) "generating, based on said number, a transmission signal comprised of access signals which are consecutive in a time domain and which include an access signal and at least one duplication of said access signal, wherein said access signals are identical in number to said number specified by said information;" and

(3) "transmitting said transmission signal, from a terminal apparatus, on at least two consecutive time slots using a resource selected at random from resource candidates."

Toskala discloses, in Figs. 2 and 3 and the relevant description, that the mobile station transmits a series of power-ramped access preamble in spaced time slots, as described in col. 5, lines 10-41:

> "Turning now to the flow chart shown in FIG. 2, the enhanced uplink RACH capture procedure embodying the present invention is illustrated therein for purposes of describing the invention and is generally designated 150. The RACH capture procedure starts with the UE 152 transmitting a series of time-spaced access preambles of increasing transmit power on each of the subsequent transmitted preambles as represented by the function block 154. The access preambles are transmitted to Node B, represented by the function block 156. Upon receipt of an access preamble of sufficient power, an AI signal is returned to the UE 152 causing it to stop transmitting the access preambles as indicated in block 158. Receipt of the AI signal at the UE initiates transmission of the RACH message as indicated by the function block 160.
>
> A collision detection preamble (CDP), preferably random, is either added to the end of the RACH message or can be transmitted after the message as shown in block 162. The RACH message is tested for successful transmission in the Node B by checking the cyclic redundancy check (CRC) error detection code in the message. If the RACH message has been correctly captured and no collision detection indicator (CDI) is transmitted by Node B

6

to this UE, the RACH transmission procedure ends in the UE as shown in block 166. If in block 164 it is detected that several RACH messages were transmitted in the same RACH slot, or the message coding is otherwise unsuccessful, a CDI matching the CDP of one of the UEs transmitting in the same RACH slot is returned by the Node B requesting retransmission of the RACH message in a different time slot, thus resolving the collision condition."

Toskala does not teach or suggest features (1), (2) and (3) above. That is, Toskala does not disclose (1) receiving from a base station information specifying a number, and (2) generating, based on the number, a transmission signal comprised of the access signals which are consecutive in a time domain and which include an access signal and at least one duplication of the access signal, wherein the access signals are identical in number to the number specified by the information, and thereafter, (3) transmitting the transmission signal, comprising the access signal and the at least one duplication thereof, on consecutive time slots.

Toskala merely discloses, as information related to access preambles, an acquisition indicator (AI) and RACH control parameters including a maximum number of preamble ramping cycles. However, the AI and the RACH control parameters do not specify a specific number of access signals (comprising an access signal and at least one duplicate thereof), which are to be used to form a transmission signal. The AI is only acknowledgement information for an access preamble successfully received at Node B, and the maximum number of preambles is only a restricted number of access preambles which the UE is allowed to transmit until the UE receives the AI. It is particularly noted that Toskala merely generates a plurality of transmission signals separately, each including a single access preamble, and does not generate a single transmission signal comprising an access signal and at least one duplicate thereof.

Also, in Toskala, the time-spaced access preambles are transmitted on non-consecutive time slots 1 and 4 as shown in Fig. 3, so that Toskala does not describe information specifying a number

7

of access signals, which are transmitted consecutively in a time domain on consecutive time slots.

Further, Toskala discloses that the mobile station transmits a RACH message and retransmits the RACH message when decoding of the RACH message fails at the Node B. Toskala discloses, as information related to the RACH message, a collision detection indicator (CDI). However, the CDI is only an indicator indicating the occurrence of collision of the RACH message and constitutes a request for the UE to retransmit the RACH message. As clearly understood from Fig. 3 and the relevant description, the RACH message and the retransmitted RACH message are transmitted on non-consecutive time slots, so that Toskala does not teach or suggest information specifying a number of RACH message signals which form a single transmission signal and which are transmitted consecutively in a time domain in consecutive time slots.

Further, Toskala does not teach or suggest feature (2) "generating, based on said number, a transmission signal comprised of access signals which include an access signal and at least one duplication of said access signal." To the contrary, Toskala generates a transmission signal comprising a single access preamble or a single RACH message and transmits it, and if the AI is not received or the decoding fails, then generates another transmission signal comprising a single power-ramped access preamble or a single RACH message and transmits it. In other words, each of the access preambles or RACH messages of a single mobile terminal of Toskala is transmitted as a single transmission of one access preamble or RACH message at a time. The plural access preambles are never transmitted at the same time, in the form of a single transmission of an access preamble and a duplication of the access preamble, and the RACH messages are never transmitted at the same time, in the form of a transmission of a RACH message and a duplication of the RACH message.

8

Also, as is clear from the above, Toskala does not teach or suggest the subject matter of claim 11 that "said access signals are identical in number to said number specified by said information." Instead, a series of time-spaced access preambles of Toskala are transmitted until Node B receives the preamble and the mobile station receives the acquisition indicator (AI) from Node B. That is, the number of access preambles transmitted from the mobile station depends on when Node B is able to successfully receive a preamble, and the number of access preambles (the number being the total number including an access signal and at least one duplication of the access signal) in a transmission signal transmitted from the mobile station is never specified by any information including the AI and the maximum number of access preambles. In fact, Toskala never transmits a transmission signal comprising more than one access preamble. Similarly, the RACH messages of Toskala are sent one at a time and are never sent at the same time as a RACH message and a duplication of the RACH message. Toskala's RACH messages are (re)transmitted until Node B receives the RACH message successfully and the mobile station does not receives a CDI matching with its CDP. That is, the total number of RACH messages transmitted from the mobile station depends on when Node B is able to successfully receive the RACH message, and the total number of RACH messages transmitted from the mobile station is never specified by any information including the AI and CDI.

The newly cited Newberg reference discloses a random access time slot divided into subslots (see, Fig. 8 and col. 9 lines 3-10) and the plural communication units may transmit identical transmissions in multiple subslots. However, Newberg does not cure the above-noted deficiencies of Toskala, relative to above features (1) and (2). Newberg does not describe that the transmission signals are transmitted from a single mobile station on at least two consecutive subslots, so Newberg does not describe the above feature (3) as well.

9

Accordingly, it is submitted that even if the teachings of Toskala and Newberg were combined, the result still would lack the above-noted subject matter of method claim 11, and thus, claim 11 is not rendered obvious by the teachings of these references, considered alone or in combination. Claim 13 is directed to a terminal apparatus reciting similar subject matter to that of claim 11 and is allowable for similar reasons. Thus, it is submitted that claims 11 and 13, and dependent claims 12 and 17, are not rendered obvious by these references.

In light of the foregoing, a notice of allowance of claims 11 and 13 and all claims dependent therefrom is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

Date: September 9, 2010
JEL/att

James E. Ledbetter
Registration No. 28,732

Attorney Docket No. 009289-06187
Dickinson Wright PLLC
1875 Eye Street, NW, Suite 1200
Washington, DC 20006
Telephone: (202) 457-0160
Facsimile: (202) 659-1559

DC 9289-6187 159548